

ultimately, only 41% of the points within our plans were documented. Following our change in practice, the re-audit demonstrated statistically significant improvements (26/40 and 83% respectively, $P < 0.05$).

All other criteria also demonstrated improvement: date (70% to 92%), time (37.5% to 78%), neurosurgery SpR name (10% to 50%) and Consultant neurosurgeon (2.5% to 20%).

Conclusions: This simple measure has helped achieve more rigorous documentation. This has a clear benefit to the safety of patients, and is a transferrable technique to many aspects of medicine.

1506: A REVIEW OF SOCIAL MEDIA IN HEALTHCARE AND ITS APPLICATIONS IN SURGERY

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Aims: The immediacy, relevance and accessibility of social media can be used to encourage and facilitate communication. The healthcare sector has been slow to engage. We review its current use, and potential application to surgery.

Method: Systemic review in line with the PRISMA statement using an advanced PubMed MEDLINE search. Free-text strategy was constructed using terms "blogtiny_mce_marker", "wiki", "Facebook", "MySpace", "YouTube" and "Twitter" and "(social media) AND surgery". Results limited: English, full publications, >1 Jan 2000.

Results: Searching PubMed for 'social media', there were 177 publications in 2000, rising to 750 in 2011. Recent US, New Zealand and UK studies indicate that while medical students (41–44%) and junior doctors (75%) use social media, it declines among residents (12.8%) and senior staff grades (50%). Professionalism concerns are common, with 7% of doctors viewing patient Facebook profiles. Among surgical trainees, up to 50% of their professional profiles were publicly available. 42.1% of medical blogs contain information on individual patients with 16.6% describing patient-doctor interactions in sufficient information to identify doctor and patient.

Conclusions: Social media is rapidly growing but if healthcare is to embrace it, it is imperative for quality control and guidelines to ensure novel technology doesn't compromise patient safety or dignity.

NEUROSURGERY

0210: ASIT-BNTA PRIZE WINNER: CFD SIMULATION OF CEREBRAL ANEURYSMS – WITH RESPECT TO VARYING GEOMETRY TO ASSESS RISK OF RUPTURE

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Aim: Cerebral aneurysms are a worldwide problem, which if not appropriately detected and managed run the risk of rupture. The risk and benefit of surgical intervention needs to be carefully considered as even surgery carries a high risk. The criteria currently used to stratify this risk is based on size, yet there are many other factors that play a role in assessing risk of rupture. This study uses computational fluid dynamics (CFD) to model an aneurysm and vary different parameters to see how this affects the risk of rupture.

Methods: A model of anterior communicating artery aneurysm was constructed using a CFD package; the geometry of the model was varied to see at which points the flow was sensitive to geometrical change. Pulsatile flow was applied to mimic that of cerebral blood flow.

Results: Changing the geometry of the aneurysm itself heavily changed the vortex patterns observed. Changing the geometry of the inlet did not cause a big change in flow patterns.

Discussion: Multi lobulated aneurysms are more prone to complex flow patterns and more prone to rupture therefore shape should be used along with size to stratify risk of rupture.

0237: VAGAL NERVE STIMULATION IN CHILDREN UNDER 12 YEARS OLD

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Objective: To assess the efficacy with regards to seizure reduction and safety of vagal nerve stimulation (VNS) in children under 12 years old.

Design: Retrospective review of patients that underwent insertion of VNS over a 3-year period, with at least 2 years of follow-up.

Methods: Patients identified from paediatric epilepsy surgery database, case notes reviewed and parents contacted by telephone. Data collected on

length of time with epilepsy prior to surgery, diagnosis, type of epilepsy, age at time of surgery, sex, number of seizures pre and post VNS, number of anti-epileptic drugs pre and post VNS and complications.

Results: 10 were male and 6 females. The mean time with epilepsy prior to surgery was 5.7 years and mean age at surgery was 7.6 years. Overall, 56% of children experienced a >50% reduction in seizure frequency. Of these patients 4 (25%) had reduction of >80%. 7 (44%) had no reduction in their seizure frequency. The mean reduction in anti-epileptic medications post-op was 0.5. Two patients underwent removal of their VNS.

Conclusions: VNS is safe and well tolerated in the under 12 age group with over half the patients responding well. The difficulty is pre-operatively identifying the children that will do well.

0545: THE POSITIVE PREDICTIVE VALUE OF CLINICAL ACUMEN IN DECIDING ON THE APPROPRIATENESS OF ADMISSION TO NEUROSURGICAL SERVICES. ARE THERE IMPLICATIONS FOR MAJOR TRAUMA CENTRE ADMISSION PROTOCOLS?

Rosalind Mole, Adam Williams, Peter Whitfield. Derriford Hospital, Plymouth, UK.

Aim: Neurosurgical centres are often co-located in Major Trauma Centres (MTC) and associated with the development of direct MTC admission pathways that bypass clinical judgement and risk overwhelming rationed resources. We investigated the predictive tools for, and the outcomes of, head-injured patients whom we did not deem suitable for tertiary care, but who would have met the MTC criteria for direct admission.

Methods: We undertook a retrospective audit into head-injured patients, deemed by TARN appropriate for direct admission, but who were refused. Ratified outcome predictors (ISS and Rotterdam CT score) were calculated. These outcomes predictors were then compared with our point-of-referral clinical decisions, and the true patient outcome.

Results: Of 59 patients, 73% survived without tertiary centre involvement. We had predicted survival in 75%. ISS (78%) and Rotterdam CT score (87%) were less accurate.

Furthermore, clinical acumen had correctly predicted death or survival in 56/59 (95%) cases, with a positive predictive value (of survival) of 95%, and a negative predictive value of 93%.

Conclusions: Clinical acumen has proven the best predictor of clinical outcome, thus admission to a MTC with a cranial injury should be discussed with an experienced neurosurgeon, to optimise patient care and resource rationing.

0575: CO-PRESCRIPTION OF PPIs WITH DEXAMETHASONE IN NEUROSURGICAL PATIENTS – A TRADITION WITH COMPLICATIONS?

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Aim: Doctors are vigilant to minimise patient risk whenever possible, and proton pump inhibitors (PPIs) may increase the risk of severe infection (e.g. *C. difficile* diarrhoea). Neurosurgery commonly prescribes dexamethasone, and owing to long held beliefs, co-prescribes empiric PPIs. We sought to investigate the PPI-related complication rate in neurosurgical patients.

Methods: We undertook a retrospective audit of 100 patients with glial tumours. They were assessed for pre-existing GORD, dose of Dexamethasone and PPI, and inpatient complication rates. GPs were then contacted for evidence of subsequent presentations with either PPI or dexamethasone related complications.

Results: 100 Patients were recruited (mean age 59.16 range 26–86, 6 with previous GORD/PUD and using a PPI). Mean follow-up was 227 days (range 7 to 538). All patients were commenced on dexamethasone 16mg/day, and 98% were co-prescribed a PPI. There was no evidence of *C. difficile* infection. 1% developed *C. difficile* negative diarrhoea and 1% developed gastritis.

Conclusions: We have demonstrated a reassuringly low rate of Dexamethasone and PPI related complications in this cohort. Derriford no longer routinely co-prescribes a PPI with Dexamethasone, and we are re-auditing to assess for an increase in gastritis-related morbidity.

0606: OUTCOME COMPARISON BETWEEN YOUNG AND ELDERLY PATIENTS FOLLOWING INTRACRANIAL MENINGIOMA RESECTION

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